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RECENT AND FORTHCOMING MEETINGS

1950

2-9 November	WHO Expert Committee on International Epidemiology and Quarantine, Legal Subcommittee, third session, Geneva
6-7 November	WHO Expert Committee on the Unification of Pharmacopoeias, Subcommittee on Non-Proprietary Names, first session, Geneva
6-11 November	WHO Expert Committee on Biological Standardization, fourth session, Geneva
6-13 November	FAO/WHO Expert Panel on Brucellosis, first session, Washington
27 November-9 December	Commission for Technical Co-operation in Africa, WHO Malaria Conference in Equatorial Africa, Kampala, Uganda
11-12 December	Preparatory Working Group on a Public-Health Administration Seminar, Geneva
11-16 December	WHO Expert Committee on Malaria, fourth session, Kampala, Uganda
11-16 December	WHO Expert Committee on Mental Health, Subcommittee on Alcoholism, first session, Geneva
11-16 December	Joint WHO/FAO Expert Group on Zoonoses, first session, Geneva

1951

8-30 January	WHO Executive Board : Standing Committee on Administration and Finance, Geneva
22 January-5 February	WHO Executive Board, seventh session, Geneva
30 January	Léon Bernard Foundation Committee, Geneva
9 April-4 May	WHO Special Committee to consider the Draft International Sanitary Regulations prepared by the Expert Committee on International Epidemiology and Quarantine, Geneva
10-17 April	Joint FAO/WHO Expert Committee on Nutrition, second session, Rome
19-28 April	WHO Expert Committee on the Unification of Pharmacopoeias, eighth session, Geneva
30 April-1 May	WHO Expert Committee on the Unification of Pharmacopoeias, Subcommittee on Non-Proprietary Names, second session
7 May	Fourth World Health Assembly, Geneva
28-30 May	WHO Consultative Committee for Europe, first session, Geneva
1-16 June	WHO Executive Board, eighth session, Geneva

MALARIA CONFERENCE IN EQUATORIAL AFRICA

As Dr. E. J. Pampana states in a recent study,[1] it is surprising that " Africa, perhaps the most malaria-ridden of all continents, is also the one in which modern methods of control using residual insecticides have been introduced most tardily, and then only to a limited extent ".

Considering malaria in rural districts alone, and excluding urban areas, it is seen that this methodical control has so far been undertaken in only a few regions, such as the Union of South Africa, Southern Rhodesia, Madagascar, and Mauritius.[2] In fact, from the Sahara to southern Africa malaria is still everywhere a major scourge. The problem of control over this vast area is so complex that no single solution valid everywhere can be found. For, from the savannah of the Sudan, through the vast equatorial jungle, to the semi-desert table-land, the degree of malaria endemicity varies with the geographical conditions, climate, species of vector anopheles—whose behaviour varies according to the region—and the living conditions of the inhabitants.

Two basic questions dominate the problem of malaria control in these territories :

(*a*) Is it advisable to combat malaria in the so-called hyperendemic areas (where there is a high degree of transmission and the disease is transmitted throughout the year) in which the adult population has reached a high degree of collective immunity ?

(*b*) How effective are residual insecticides against the most important vector, *Anopheles gambiae*, whose behaviour varies according to the region ?

The Malaria Conference in Equatorial Africa, which met from 27 November to 9 December 1950 at Kampala (Uganda), under the auspices of WHO and of the Commission for Technical Co-operation in Africa South of the Sahara (CCTA), studied these problems which are peculiar to Africa. This conference, which was not inter-governmental but of a purely technical nature, was attended by malariologists of the whole world. Various reports [3] on the malaria situation in Africa and the experiments already made, together with an account of a general survey by one of the experts of WHO, Professor F. J. C. Cambournac, after a seven-month tour in Equatorial Africa, served as a basis for discussions.

The various statements made to the conference and the discussions which took place there are summarized below. The report of the conference, together with the recommendations it adopted, has recently been published as No. 38 of the *World Health Organization : Technical Report Series*.

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[1] Pampana, E. J. (1951) *Lutte antipaludique par les insecticides à action rémanente*, Genève (*Organisation Mondiale de la Santé : Série de Monographies*, No. 3)

[2] See *Chron. World Hlth Org.* 1951, 5, 86.

[3] Several of these reports will appear in a forthcoming number of the *Bulletin of the World Health Organization*.

Malaria in Equatorial Africa

Geographical distribution

" ... The transmission of malaria takes place throughout the year along the African coasts, whether in the west or in the east, up to a more or less considerable distance inland, as well as in a large part of the continent situated between latitude 10° north and latitude 10° south, wherever the altitude is below about 1,400 m. These are areas where hyperendemicity is the rule and where the incidence of blackwater fever is at its highest. However, as regards the west coast the transmission period is shortened, even in regions very near the sea, southwards from latitude 8° south, because of the cold Benguela current and the central mountain group of the continent which, inter alia, has the effect of markedly reducing the length of the rainy season from this latitude southwards.

" As the altitude increases, the transmission period becomes shorter. At 1,400 m the incidence of malaria is still strong but, around 1,800 m, the epidemic type becomes the rule.

" ... the temperature at lower altitudes may already be sufficiently low to arrest completely or diminish transmission during a more or less long period of the year.

" However, limiting altitudes at which malaria ceases or where the disease would be more or less severe cannot be fixed, since everything depends on the climate and not on the altitude factor alone. For example, in Kenya malaria of the epidemic type is still prevalent towards 2,000 m and does not disappear until 2,700 m ..."

Vector anopheles

Two species of anopheles are mainly responsible for mass infection in tropical Africa : *A. gambiae* and *A. funestus*. Of the two, *A. gambiae* is by far the more important, and it is curious to note how widely its behaviour differs from region to region. This mosquito is considered essentially anthropophilic and endophilic. Yet, at high altitudes in Ethiopia and on the High Veld of the Transvaal, it is clearly zoophilic and less endophilic, while in Kenya, also at a high altitude, it is responsible for the transmission of malaria. In Southern Africa it shows marked endophilism but in West Africa, Tanganyika, and Uganda, on the other hand, it attacks man in the open air. It bites during the day in the jungle of Uganda, whereas elsewhere it bites during the night. In Northern Rhodesia, *A. gambiae* has been proved capable of reaching a distance of over 6 km from its breeding-place. The kind of life it leads seems to depend largely on climatic conditions, and it is therefore not advisable to establish the biological varieties of this species, to account for variations in its behaviour, before the question has been thoroughly examined.

FIG. 1. CONFERENCE ON MALARIA IN EQUATORIAL AFRICA, KAMPALA, UGANDA

Group of participants

A. funestus generally shows a high degree of anthropophilism and endophilism. In Uganda and South Africa it does not seem to fly more than some 800 m in the absence of any prevailing wind ; and, as an agent propagating the disease, it is, therefore, not very dangerous. Yet, in Rhodesia, flights of up to 8 km with the wind have been registered. It remains relatively stable in numbers and is therefore considered partially responsible for endemic malaria. It was possible to impute a recent epidemic in Kenya to this insect.

Morbidity and mortality due to malaria

Statistics on morbidity and mortality due to malaria are very incomplete for the whole of the African territory concerned. Even in well organized communities it is difficult to prepare statistics, and they are naturally quite rudimentary in regions where the health administration is not yet very highly developed. It is difficult, in particular, to appreciate the exact influence of malaria in a human population suffering from various diseases.

However, as the experts have emphasized, it is essential to have morbidity and mortality statistics for immune groups on the one hand and for non-immune groups on the other, so that health administrations can determine the factors implicated in malarial endemicity and have a means of estimating the results to be expected from future campaigns.

Malaria as an Obstacle to the Development of Africa

In the absence of precise information it is hardly possible to estimate the damage which malaria causes among African peoples, and its influence on industrial and agricultural production, education of children, and social welfare in general. But the obvious improvement brought about in countries where systematic campaigns have begun makes it possible to estimate by comparison the losses caused by this disease to the economy of the continent. In the report which Dr. F. J. C. Cambournac submitted to the conference, he points to the substantial advantages obtained in the Transvaal and in Natal as a result of malaria-control campaigns... " before the campaigns, 30-40% more workers than necessary were recruited on the great sugar-cane and other plantations in order to leave a margin for absenteeism on account of sickness, whereas today, with the disappearance of malaria, only the necessary number is recruited, thus effecting a gain of at least 30% " ... " In the region of Letaba, one of the richest on the continent, there are now 12,000 acres of irrigated land, whereas in 1940 there were only 700 ", " ... some idea of the improvement effected in the country may be gathered from the fact that the total annual revenues for Tzaneen have increased from about 1,250 units in 1937 to 12,600 in 1949 ".

Movements of population

If one accepts that the movement of populations and the displacement of workers within the continent are closely linked with the economic progress of Africa, then it follows that malaria can exert a prejudicial effect on this development. It is beyond doubt that " migrations " and " malaria " are two closely interrelated factors.

On the one hand, malaria can be introduced by infected persons into an area where it was previously unknown and take epidemic form there when the vector anopheles exist in sufficient numbers. This is the case in the dry south-west regions of Africa. In Ruanda Urundi malaria appears to have been introduced by the troops during the 1914-18 war. Towards the end of the XIXth century, the coastal populations of Madagascar, establishing themselves in the interior of the island, imported the disease into regions where it was previously unknown.

On the other hand, groups of people from highly infected areas, who are thus immunized, lose their immunity on going to work in less infested areas. For instance, workers in the copper mines of Northern Rhodesia often show very grave forms of malaria when they return to their place of origin in the hyperendemic areas.

Infection by strains of malaria parasite different from those of their place of origin often cause very serious forms of the disease among workers. This is the case with the Takrures of Nigeria who go to Eritrea, as it occurred among troops from the Belgian Congo stationed in Nigeria during the war. Lastly, malaria may be introduced as a result of development work : agricultural projects, irrigation, road building, etc. The establishment of large-scale rice cultivation projects, for instance, has brought about a temporary increase of malaria in parts of West Africa.

The conference drew the attention of the public works departments to the dangers of spreading malaria attendant on development work. Any irrigation schemes or rice-growing projects should be planned and supervised with the technical co-operation of the health authorities " in order to avoid the creation of actual or potential breeding-places for mosquitos ".

Malaria Control

Hyperendemic malaria and immunity

As stated at the beginning of this article, the question of the advisability of malaria control in hyperendemic areas was one of the main questions on which the conference had to take a decision. Two different conceptions were presented.

According to the first, which might be called non-interventionist, hyperendemicity due to the uninterrupted transmission of the infection throughout the year produces a state of immunity in the adult population which is shown by a high degree of resistance to re-infection. In the presence of this intensity of infection a number of infants less than one year old die in the absence of treatment. Those who survive are generally immune. It is difficult to ascertain whether the development of children is seriously impeded by this disease. This hardly seems to be the case, for infantile mortality may be due to many other causes. It is feared that, as a result of treatment and diminution in the degree of infection, populations may lose their immunity and thus be at the mercy of an outbreak of the disease in the event of a slackening of defensive measures.

According to the other conception—interventionist—malaria occurs in all degrees of endemicity from sporadic infection to perennial superinfection. A high endemicity certainly results in the development of a resistance by those long exposed to it, but before this resistance is attained children suffer and many of them die. The acquisition of resistance by

adults reflects suffering in young people and does not represent the attainment of wellbeing by the population as a whole ; on the contrary, there is considerable evidence of definite damage inflicted on the community. Hyperendemicity does not, as is often thought, result in a kind of commensalism between the parasite and man ; in reality, hyperendemic malaria leads to a very high degree of morbidity and mortality, without counting other costs such as restriction of movement, interference with education, and retarded physical development. It is desirable, therefore, for the wellbeing of the people that the transmission of malaria should be terminated by appropriate control methods, whatever the degree of endemicity.

After long discussions on the question, the conference decided in favour of antimalarial intervention by modern methods, " whatever the original degree of endemicity and without awaiting the outcome of further experiments ". Recommendations to governments were formulated to this effect. The conference pointed out that " the higher the degree of endemicity, the more important it is establish a malaria-control organization ". To meet the objection as to the risk of re-infecting populations which as a result of control had lost their immunity, the conference considered that should " an outbreak (of malaria) occur it would be possible to control it by the use of insecticides and antimalarial drugs with reasonable speed, avoiding undue suffering by the people ".

Action of residual insecticides on A. gambiae

In view of the favourable results of the malaria control campaigns, in particular against the vector *A. gambiae*, in several regions of Africa, the conference was of the opinion that it was possible to bring about a very large reduction in the transmission of *gambiae* malaria by the application of residual insecticides in human habitations and other mosquito shelters, using the gamma isomer of benzene hexachloride (BHC) at a dosage of 10 mg per square foot every three months, or DDT at a dosage of 200 mg of the para-para product per square foot every six months.

Other Considerations

The conference also discussed the relative value of the various methods of control, including chemotherapy, the efficacy of the main insecticides or mixtures of these products, and that of the various drugs used in Africa. It also studied the experiments on vector-species eradication in the absence of natural barriers, with particular attention to the experiment in progress at Ilaro (Nigeria). The conference prepared a list of research investigations which should be carried out in the various malarial regions of Africa. Recommendations were also made, and appeared in the report, on training of staff, fellowships, and the organization of international courses on malariology in Africa.

1950 : YEAR OF CO-OPERATION

Annual Report of the Director-General

The second full year of WHO's activities was marked by an increased emphasis on the Organization's role as a co-ordinating agency in international health work. Programmes of technical assistance for economic development called for co-operation with the United Nations and other international organizations as well as with the individual countries concerned. Decentralization, which tended to direct attention to *all* of a region's needs, also made co-operative efforts essential. WHO assumed technical responsibility for projects which would have been quite impossible within the limits of its own budget. More and more its task became one of assisting governments to assess their health needs and plan programmes to meet them, taking into consideration the pace at which improvements could be absorbed and the aid which might be available from various sources. The guiding policy of the Organization's operations began gradually to change from concentration on " priority " problems—such as malaria, tuberculosis, and venereal diseases—to an attempt to fit health conditions into a framework of a country's social and economic needs ; and helping governments to develop adequate public-health services and to train personnel for these services gained new significance as functions of WHO.

These developments were called to the attention of the Organization in a statement made by the Director-General to the Standing Committee on Administration and Finance in January 1951.[1] Further reference is made to them in the annual report of the Director-General,[2] which reviews the work of WHO for 1950.

Control of Diseases

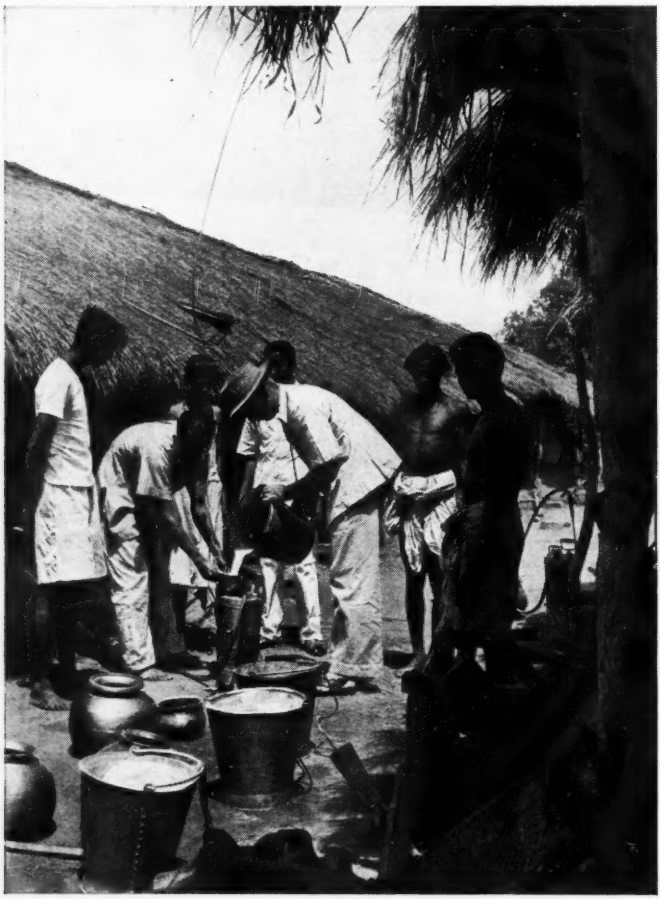
Malaria

Efforts to eradicate malaria continued to play an important part in the Organization's activities. At the end of the year, nine malaria-control demonstration teams were in operation : four in India, and one each in Afghanistan, Cambodia, Pakistan, Thailand, and Viet Nam. UNICEF collaborated in the projects in India, Pakistan, and Thailand. These demonstration projects served as training centres for local personnel so that the work might be carried on after WHO aid is withdrawn. In some instances, WHO operations stimulated governments to initiate parallel programmes of their own. The demonstration teams also assisted in other health pro-

[1] *Chron. World Hlth Org.* 1951, **5**, 3
[2] *Off. Rec. World Hlth Org.* **30**

jects : for example, a kala-azar survey and treatment programme was undertaken in Pakistan, and public-health nurses attached to the teams engaged in maternal and health activities.

FIG. 2. MALARIA CONTROL. A spraying squad in Orissa, India, receives instruction from the leader of a WHO/UNICEF malaria-control team in the proper method of mixing DDT solution and in the use of spraying equipment.



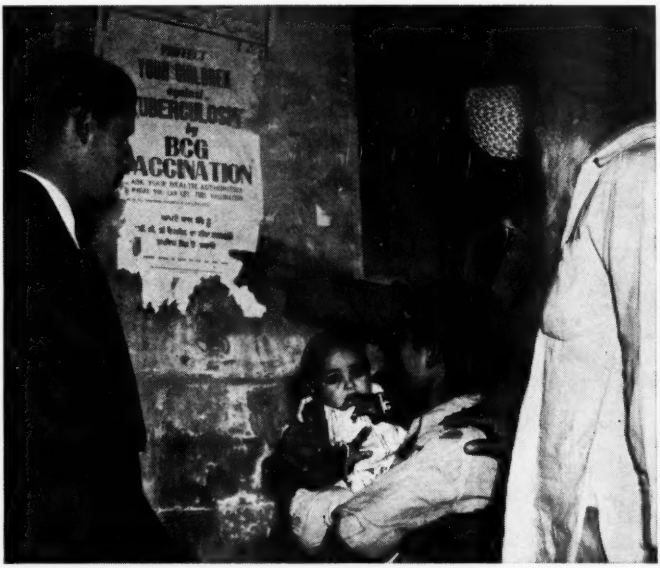
Consultants visited numerous countries to advise on malaria problems and to lecture at medical centres. Expert advice was also supplied through meetings of expert committees—the Expert Committee on Malaria [3] and

[3] *World Hlth Org. techn. Rep. Ser.* 1951, 39

the Expert Committee on Insecticides.[4] Malaria in Equatorial Africa was given special consideration at a conference held at Kampala, Uganda, under the joint auspices of WHO and the Commission for Technical Co-operation in Africa South of the Sahara.[5]

Close collaboration was maintained with UNICEF, FAO, and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWAPRNE), all of which participated in projects with WHO.

FIG. 3. TUBERCULOSIS CONTROL. In a district of Patiala, India, the local language text of a BCG campaign poster is translated for the benefit of the Danish doctor.



Tuberculosis

Two significant developments were noted in WHO's work in tuberculosis during 1950 : a considerable expansion of regional activities, and the decision of the Joint Enterprise to wind up its field operations in the BCG vaccination campaigns by the end of June 1951, which meant that WHO had to begin to make provisions for continuing some of the services alone

[4] *World Hlth Org. techn. Rep. Ser.* 1951, 34
[5] *World Hlth Org. techn. Rep. Ser.* 1951, 38

after that date. During the year two regional advisers were appointed, one for South-East Asia and another for the Western Pacific.

Field activities included : (1) establishment of demonstration and training centres in El Salvador and Turkey and of a BCG laboratory in Mexico ; (2) BCG campaigns, or other types of tuberculosis-control assistance in numerous countries of the Americas, South-East Asia, the Eastern Mediterranean, and the Western Pacific ; (3) a survey of the incidence of tuberculosis in French Somaliland ; (4) assistance in nursing

FIG. 4. BCG WORK IN MEXICO. The chief nurse of the BCG Institute of Mexico inoculates a child at a Government nursery home.

of tuberculous patients in China ; (5) expert advice on the organization of nursing services to Greece, on BCG vaccination to Ireland, and on streptomycin therapy or the use of x-ray and laboratory supplies to Austria, Bulgaria, Czechoslovakia, Finland, Greece, Italy, Poland, and Yugoslavia ; (6) provision of x-ray equipment for Monaco.

Guidance in the Organization's activities in connexion with tuberculosis was given by the Expert Committee on Tuberculosis, which met in September.[6]

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[6] *World Hlth Org. techn. Rep. Ser.* 1951, 32

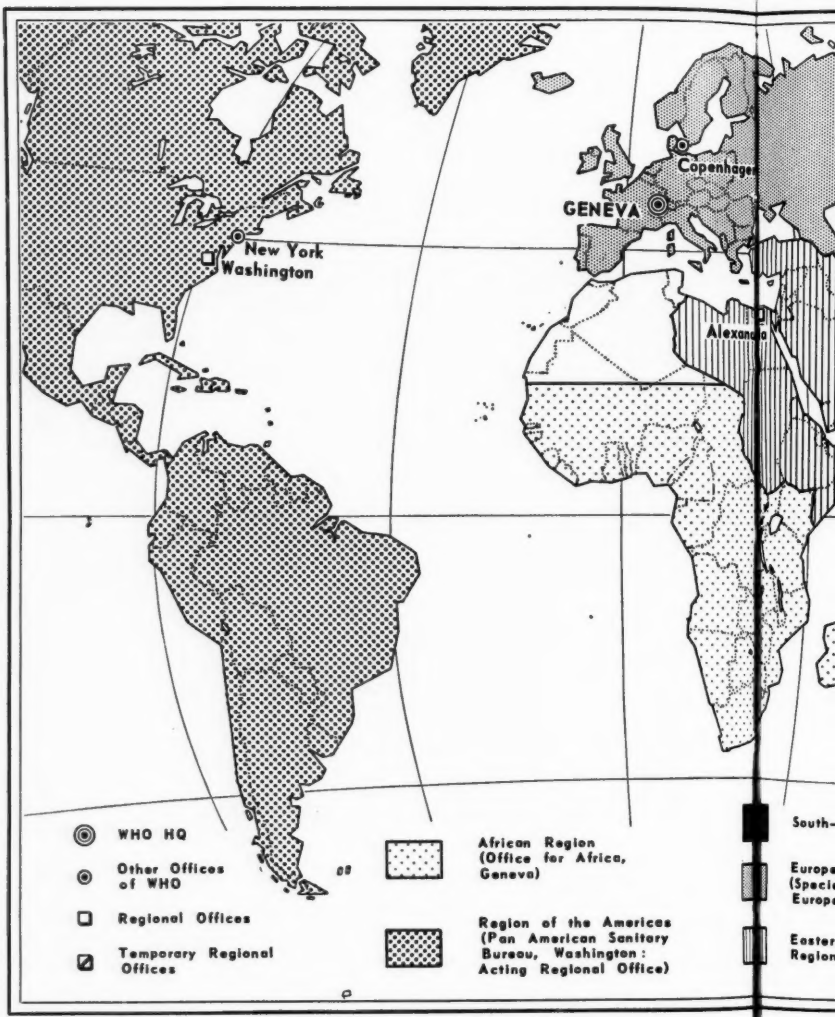
Venereal diseases

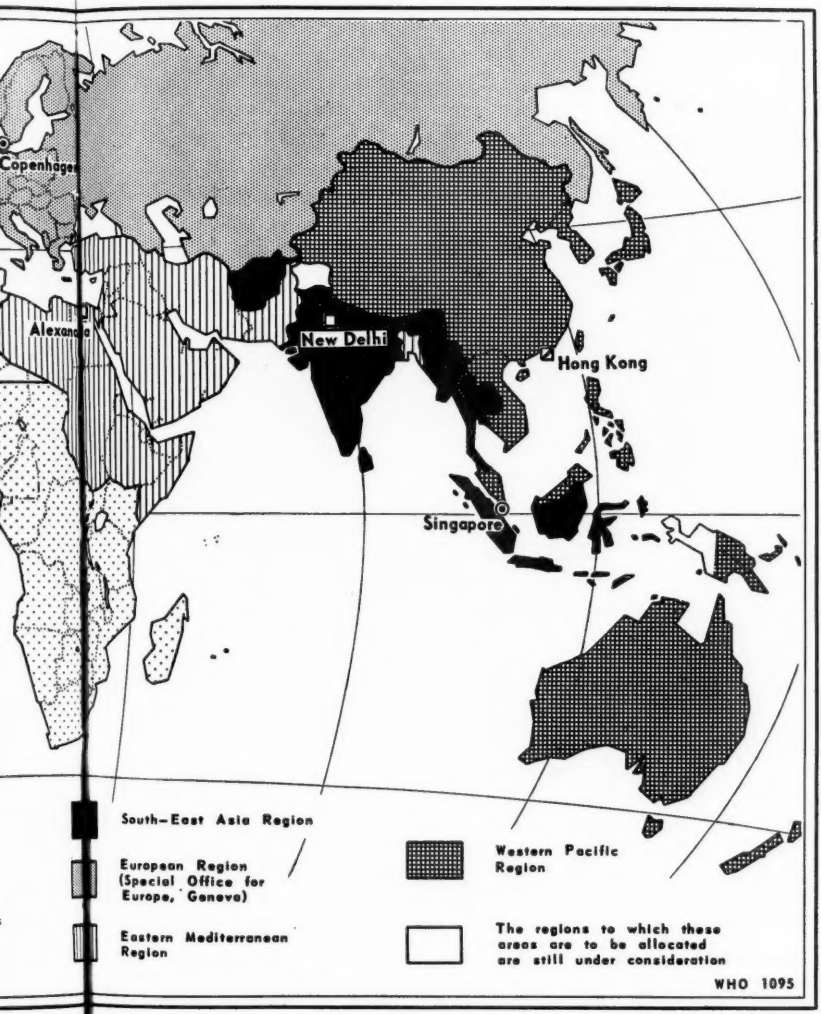
WHO's efforts to control syphilis and other treponematoses were " continued, consolidated, and expanded " during 1950. Consultant services were made available to 15 countries. The demonstration team at Simla (India) was in its second year of operations and tried to finish the " demonstration " phase of its work and to arrange for the training phase to be incorporated into the permanent public-health services of the country.

FIG. 5. YAWS CAMPAIGN, HAITI. Patients' names are inscribed and their case-histories recorded by the nurse.

In collaboration with UNICEF, mass treponematoses-control projects were initiated in Haiti, Indonesia, Iraq, and Thailand, an estimated 300,000 persons being treated during the year. A control programme was launched in Ecuador, and a project which included maternal and child health activities as well as venereal-disease control was undertaken in Afghanistan. WHO provided technical supervision, and UNICEF supplies, for campaigns in Bulgaria, Czechoslovakia, Finland, Hungary, Poland, and Yugoslavia. Prenatal and congenital syphilis were emphasized in programmes in Italy and Greece. The problem of venereal disease among merchant seamen received special attention : WHO assisted in the formation of the Inter-

FIG. 6. REGIONS AND OFFICES OF THE WORLD

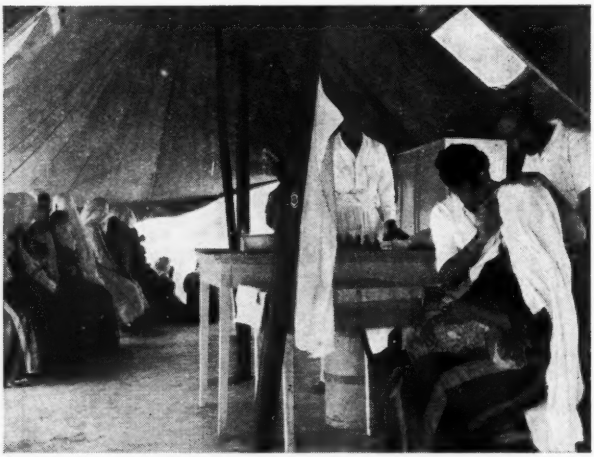



Copenhagen
Alexandria
New Delhi
Hong Kong
Singapore
South-East Asia Region
European Region
(Special Office for
Europe, Geneva)
Eastern Mediterranean
Region
Western Pacific
Region
The regions to which these
areas are to be allocated
are still under consideration
WHO 1095

national Anti-venereal-disease Commission of the Rhine and prepared the *International List of Venereal-disease Treatment Centres at Ports* and an individual treatment-record booklet for the use of seamen.

The laboratory aspects of venereal-disease problems were given considerable emphasis, guidance being supplied by the Subcommittee on Serology and Laboratory Aspects of the Expert Committee on Venereal Infections.[7] Demonstrations on penicillin therapy and on cardiolipin antigens were presented at several university and medical centres in Europe and the Eastern Mediterranean Region, including the Statens Seruminstitut in Copenhagen. Most important was the establishment of the International

FIG. 7. TRACHOMA CONTROL. An eye clinic in the UNRWAPRNE camp at Jericho.



Treponematosis Laboratory Centre, at the School of Hygiene and Public Health of Johns Hopkins University, Baltimore, Md., USA, where basic research studies are being conducted. Also noteworthy were international symposia on venereal diseases which were held in Helsinki and in Paris.[8]

Other communicable diseases

Activities relative to other communicable diseases took the form chiefly of aid to research projects and provision of the services of consultants. A grant was made to the Indian Council of Medical Research for studies

[7] *World Hlth Org. techn. Rep. Ser.* 1951, 33
[8] *Chron. World Hlth Org.* 1951, 5, 9

on cholera ; the World Influenza Centre, London, continued and extended its work, with the aid of WHO influenza centres whose number increased during the year to 34 ; in collaboration with FAO and with financial aid from UNICEF, WHO established 12 brucellosis centres in various parts of the world to study the epidemiology, epizootiology, diagnosis, treatment, and prevention of this disease ; and research centres were set up to study other diseases, e.g., an antibiotics research and training centre in Rome, and international salmonella centres in different countries. Studies were initiated on plague, cholera, rickettsioses, yellow fever, bilharziasis, poliomyelitis, smallpox (dried vaccines), and trachoma.

Consultants assisted Afghanistan in combating typhus ; UNRWAPRNE in measures against bilharziasis and trachoma ; Ceylon, India, and the Maldive Islands in campaigns against filariasis ; Pakistan in controlling kala-azar ; Chile and Colombia in vaccination campaigns against diphtheria and whooping cough ; Ethiopia and Italy in the treatment of leprosy ; Turkey in the production of biological products for the control of anthrax ; and various countries in dealing with problems relative to the other zoonoses. Teams were provided for India, Chile, and Peru, and a consultant sent to the United Kingdom, to aid in the treatment and rehabilitation of victims of poliomyelitis. A WHO-sponsored project against rabies in Israel served as a research as well as control demonstration in its use of a new egg-propagated rabies vaccine.

Technical direction in many of these activities was provided by expert groups which met under the aegis of WHO and other international organizations.

Organization of Public-health Services

WHO's fundamental objective is to strengthen the health services of Member Governments. To aid in achieving this objective, the Organization during 1950 centralized in one division of the Secretariat—called the Organization of Public-health Services—activities relative to public-health administration, maternal and child health, nutrition, environmental sanitation, nursing, health education of the public, mental health, and social and occupational health.

Public-health administration

Regional advisers and consultants visited many countries during the year to make health surveys and to discuss public-health services with government authorities. Advice on hospital facilities and projects was given in Costa Rica, Luxembourg, and Surinam ; consultants advised Liberia on public-health problems ; surveys of health services were made in Lebanon and Syria ; and a consultant visited Finland to report on the working and results of the national health service in the United Kingdom.

Public-health administrators were provided for joint projects with other agencies : with UNESCO for a project in Haiti, with UNRWAPRNE for Palestine refugee relief activities, and with the United Nations for emergency aid to Korea. The Technical Assistance Programme increased the demand for public-health administrators ; plans for health demonstration areas were drawn up for implementation under this Programme during 1951.

Maternal and child health

WHO maternal and child health work increased considerably in 1950. Full-time regional advisers were appointed for the Eastern Mediterranean Region, for the Americas, and for the Temporary Office for the Western Pacific—adding to those already serving the Special Office for Europe and the Region for South-East Asia.

During the last two years WHO has co-operated with UNICEF in more than a hundred maternal and child health projects—in addition to the BCG and nutrition programmes—in more than 40 countries : 50% in Europe, 16% in South-East Asia ; 14% in the Americas ; and 10% in the Eastern Mediterranean and Western Pacific Regions. The demonstration team which started work in India in 1949 broadened its activities in 1950 into a combined rural and urban health training centre for workers in maternal and child health. Similar training projects were launched in Afghanistan, Pakistan, and the Philippines. Paediatricians or paediatric nurses were assigned to teams in other fields—venereal diseases in Burma and Indonesia, and malaria in India and Thailand. Consultants made special studies, or gave advice, on maternal and child health projects in Brazil, Chile, Colombia, Finland, and the United Kingdom.

Prematurity was studied by an expert group,[9] and programmes on the care of premature infants were worked out for Bulgaria, Czechoslovakia, Finland, France, Poland, and Yugoslavia. The health of school-age children was also the subject of study by an expert group,[10] and advice on the improvement of school-health services was supplied to various countries.

WHO participated in studies of the United Nations on juvenile delinquency and on the needs of homeless children and assisted the United Nations and UNICEF in rehabilitation programmes for physically handicapped children. Expert aid was given to IRO on problems relative to children in camps for displaced persons.

Environmental sanitation

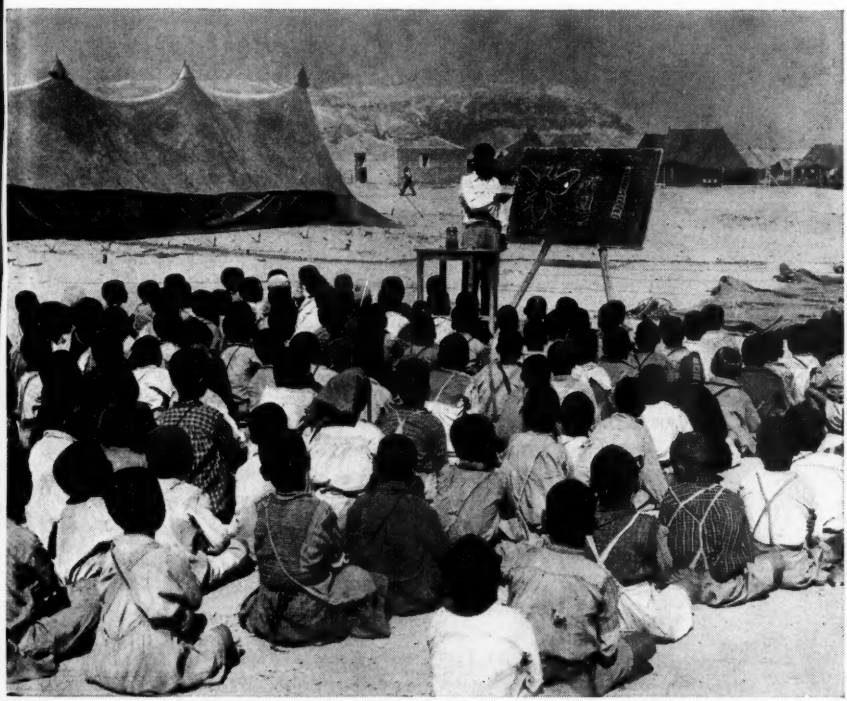
A section on environmental sanitation was established in the Secretariat in February 1950 to supervise sanitation activities, many of which are

[9] *World Hlth Org. techn. Rep. Ser.* 1950, 27
[10] *World Hlth Org. techn. Rep. Ser.* 1951, 30

related to disease-control projects. Three regional offices now have advisers on environmental sanitation.

During the year, sanitary engineers attached to malaria-control demonstration teams aided governments in dealing with other environmental sanitation problems. Water supply and milk sanitation were problems

FIG. 8. CAMP SANITATION. A lesson on how flies breed, in one of the refugee camps in Palestine.



which received special attention. Advisory services were supplied to Liberia and to UNRWAPRNE, and sanitary engineers were recruited for relief teams in Korea.

Social and occupational health

Another section in the Secretariat which was newly established in 1950 was that on social and occupational health. Most of the Organization's activities with regard to this subject were integrated with those in other

fields and, in many instances, were dependent upon co-operation with ILO and other international agencies.

Mental health

Two expert groups on mental health met during 1950 : the Expert Committee on Mental Health [11] and its Subcommittee on Alcoholism. Studies were undertaken by WHO on projects sponsored by the United Nations, one on the effects of deprivation of maternal care on mental health,[12] a second on juvenile delinquency,[13] and a third on rehabilitation in psychiatry. WHO also contributed to the development of the International Children's Centre in Paris and gave advice on UNICEF programmes relative to juvenile epilepsy and to child guidance and welfare. Consultants visited Finland, Ireland, Italy, Norway, the Philippines, Sweden, and Yugoslavia to give expert assistance in dealing with mental health problems.

Nutrition

One of the nutritional problems studied by WHO in 1950 was that of endemic goitre. Surveys of its incidence were made in Brazil, Ceylon, Colombia, Ecuador, Guatemala, and Mexico. Consultants from FAO and WHO also made a survey of " kwashiorkor ", a nutritional disorder common in tropical and subtropical areas.

In collaboration with FAO, WHO undertook a study of nutrition in Egypt and organized a training course there for participants from the Eastern Mediterranean countries. Nutritional facilities in Yugoslavia were also investigated and assistance given in establishing institutes in Zagreb and Sarajevo. A consultant helped to set up a training course in hospital dietetics in India, and lecturers gave short courses at the Institute of Nutrition of Central America and Panama. Seminars on infant metabolism were held under the aegis of WHO at Leyden and at Stockholm.[14]

Nursing

Direction in WHO nursing activities was supplied by the Expert Committee on Nursing, which met in February 1950.[15] During the year, public-health nurses continued to work with demonstration teams in various parts of the world, giving particular attention to maternal and child health. A nurse was assigned to the tuberculosis demonstration centre in Istanbul

[11] *World Hlth Org. techn. Rep. Ser.* 1951, 31

[12] Bowlby, J. (1951) *Maternal care and mental health*, Geneva (World Health Organization : Monograph Series No. 2)

[13] Bovet, L. (1951) *Psychiatric aspects of juvenile delinquency*, Geneva (World Health Organization : Monograph Series No. 1)

[14] *Chron. World Hlth Org.* 1950, 4, 359

[15] *World Hlth Org. techn. Rep. Ser.* 1950, 24

FIG. 9. AN INDIAN PUBLIC-HEALTH NURSE, member of a WHO/UNICEF malaria-control team, explains to villagers how DDT-spraying will benefit their health.

to set up nursing operations and organize teaching programmes. Paediatric and public-health nurses served in UNICEF and WHO projects in Brunei, Malaya, North Borneo, and Sarawak. A two-week working conference on nursing was held in Leyden in October to discuss, among other subjects, methods and techniques in health education.

Health education of the public

During 1950 WHO supplied to requesting countries information on various aspects of health education. Assistance was given to Sweden in a survey of health education. Health educators were assigned to the demonstration project in venereal diseases in Simla, India, to the joint UNICEF/WHO teacher-training demonstration in Sarawak, to the UNESCO project in fundamental education in Haiti, and to a UNESCO team conducting an investigation of fundamental educational needs in the Arab States.

A special consultant advised on the social and cultural aspects of the Organization's health education programme, and two health education specialists were engaged—one for the Regional Office for the Americas and the other for the Special Office for Europe.

Professional and Technical Education

The training of doctors, nurses, and other health personnel continued to be one of WHO's most important concerns and will be the subject of a thorough technical discussion at the Fourth Health Assembly. Information on many phases of medical education was collected and disseminated during the year. Co-operation was maintained with the World Medical Association and with other international organizations. Consultants conferred with health authorities of several countries—Egypt, France, Greece, India, Lebanon, the Netherlands, the Scandinavian countries, and Switzerland—on problems of training facilities and needs. WHO assisted Member Governments directly by (1) helping to organize, or sponsoring, courses and seminars, and providing lecturers and teachers for them ; (2) utilizing other WHO activities as training grounds, e.g., demonstration projects served as centres for instructing different types of personnel ; (3) awarding and administering an increasing number of fellowships ; and (4) providing medical literature and teaching equipment.

Fellowships

New developments in the WHO fellowship programme included " team training " (group-training courses, symposia, seminars, study-groups, etc.), for which short-term fellowships were awarded ; an increasing number of fellowships in nursing and sanitary engineering ; grants for undergraduate study to Fellows from countries lacking medical training facilities, e.g., Albania and Ethiopia ; administering fellowships available under the technical assistance programmes, in addition to those awarded by WHO and UNICEF ; and transfer of much of the responsibility for fellowships from Headquarters to the regions. Follow-up studies of Fellows who had completed their training revealed that nearly all ex-Fellows were employed in government, or government-sponsored, services, which gave some indication of the value of this function of the Organization.

Other Activities

In addition to the foregoing, the Director-General's report reviews other activities of the Organization : the study of methods and facilities for the production of antibiotics ; [16] encouraging the free flow of insecticides and essential drugs—antibiotics, antimalarials, etc. ; special health services, such as those in co-operation with UNRWAPRNE and with the United Nations in aid to Korea ; administration of the International Sanitary Conventions and preparation of the draft International Sanitary

[16] See *World Hlth Org. techn. Rep. Ser.* 1950, **26**

Regulations ; [17] dealing with problems of health statistics ; [18] establishing standards for biological products ; [19] the unification of pharmacopoeias ; [20] the work of the Tuberculosis Research Office in Copenhagen ; [21] publications ; library and reference services ; and public information services. Sections in the report are also devoted to technical assistance for economic development, in which the background and mechanism of the programme are described, and to collaboration with other organizations, including the United Nations, its specialized agencies, and certain inter-governmental and non-governmental organizations. Eighteen annexes supply detailed information on various aspects of the Organization's activities, and a supplement gives a summary analysis of reports from Member States.

In concluding his introductory remarks, the Director-General expresses the hope that the report " will leave all those who are interested in our work with the reassuring impression ... that despite many shortcomings, due at least in part to youth and lack of sufficient experience, despite handicaps resulting from the political divisions which still split the world, and despite financial limitations, the World Health Organization has been moving in the right direction and that its activities in 1950 are a promise for the future of the world's health ".

[17] *Chron. World Hlth Org.* 1951, **5**, 54
[18] See *World Hlth Org. techn. Rep. Ser.* 1950, **25**
[19] See *World Hlth Org. techn. Rep. Ser.* 1951, **36**
[20] See *World Hlth Org. techn. Rep. Ser.* 1950, **29** and 1951, **35**
[21] *Chron. World Hlth Org.* 1950, **4**, 331

INTERNATIONAL STANDARDS AND CONTROL OF DRUGS

During its seventh session, held in Geneva from 30 October to 4 November 1950,[1] the report on which has been published as No. 35 in *World Health Organization : Technical Report Series*, the Expert Com-

[1] The following took part in this session :

Members :

Dr. H. Baggesgaard Rasmussen, Professor of Organic Chemistry, Royal Danish School of Pharmacy, Copenhagen, Denmark ; Member of the Danish Pharmacopoeia Commission
Dr. E. Fullerton Cook, formerly Chairman, Committee of Revision of the Pharmacopoeia of the United States of America, New York, N.Y., USA
Dr. I. R. Fahmy, Professor of Pharmacognosy, Faculty of Medicine, Fouad I University, Cairo, Egypt ; Secretary, Egyptian Pharmacopoeia Commission
Dr. H. Flück, Professeur de Pharmacognosie à l'Ecole Polytechnique Fédérale, Zurich, Switzerland ; Membre de la Commission fédérale de la Pharmacopée
Dr. C. H. Hampshire, formerly Secretary, British Pharmacopoeia Commission, General Medical Council Office, London, United Kingdom (*Chairman*)
Dr. R. Hazard, Professeur de Pharmacologie et de Matière médicale à la Faculté de Médecine de l'Université de Paris, France ; Membre de la Commission de la Pharmacopée française (*Vice-Chairman*)
Dr. C. Heymans, Professor of Pharmacology and Toxicology, University of Ghent, Belgium
Dr. D. van Os, Professor of Pharmacy and Toxicology, University of Groningen, Netherlands ; Chairman, Netherlands Pharmacopoeia Commission

Secretary :

P. Blanc, Chief, Pharmaceutical Section, WHO

mittee on the Unification of Pharmacopoeias examined a certain number of draft monographs and appendices which will figure in volume II of the first edition of the *Pharmacopoea Internationalis* (Ph.I.). The committee also studied the question of international non-proprietary names for drugs and the legal protection of such non-proprietary names, and suggested that a conference on the control of drugs be convened.

Pharmacopoea Internationalis, Volume II

Volume II of the *Pharmacopoea Internationalis* will contain monographs on injections, tablets, and tinctures of a great number of the substances figuring in volume I. It will also include descriptions of vitamin B_{12} and of several antibiotics, antimalarial drugs, and synthetic analgesics, and appendices on the biological assay of certain antibiotics, the pyrogen test, the standards for cardiolipin and purified lecithin used in the preparation of antigens for the serodiagnosis of syphilis, and the table of usual doses of drugs for children. The committee examined the greater part of some two hundred draft monographs and appendices, several of which were established in collaboration with the Expert Committee on Biological Standardization.

Non-proprietary Names for Drugs

The answers received from various Member States to the WHO circular letter submitting general principles for a system of non-proprietary names were examined in detail. Nineteen countries raised no objection to these general principles and six countries suggested certain modifications. Consideration of the legal basis to be given to the project led to a recommendation that WHO examine the possibility of establishing " appropriate regulations, which make possible the rapid verification of existing names already protected and the effective legal protection of non-proprietary names selected by the Expert Committee on the Unification of Pharmacopoeias ".

The Subcommittee on Non-Proprietary Names,[2] at its first session held in Geneva, on 6 and 7 November 1950, adopted non-proprietary

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[2] The following took part in this session

Members :

Dr. H. Baggesgaard Rasmussen, Professor of Organic Chemistry, Royal Danish School of Pharmacy, Copenhagen, Denmark ; Member of the Danish Pharmacopoeia Commission

Dr. C. H. Hampshire, formerly Secretary, British Pharmacopoeia Commission, General Medical Council Office, London, United Kingdom (*Chairman*)

Dr. R. Hazard, Professeur de Pharmacologie et de Matière médicale à la Faculté de Médecine de l'Université de Paris, France ; Membre de la Commission de la Pharmacopée française (*Vice-Chairman*)

Secretary :

P. Blanc, Chief, Pharmaceutical Section, WHO

The report on the first session of this subcommittee is included in *World Hlth Org. techn. Rep. Ser.* 1951, 35.

names for about 40 substances which will figure in volume II. These non-proprietary names—in Latin, English, and French—are mentioned in the report.

Control of Drugs

Several Member States have already sent in their replies to the questionnaire circulated by WHO for the purpose of obtaining information on national pharmacopoeias and the methods employed for the control of drugs in the various countries. In order to encourage the exchange of information and the co-operation of health authorities of Member States on this question, the committee recommended that a conference on the control of drugs be held in 1952 or 1953 under the auspices of WHO. The object of the conference would be " to consider the advantages of more uniform methods for the control of drugs in the various countries, in the interests of health and international commerce, and to make recommendations on the best methods for the control of drugs ".

Notes and News

Tuberculosis

Istanbul Tuberculosis Centre

A recent report from Istanbul revealed that, as of 1 April 1951, 1,202 persons had benefited from training at the WHO Tuberculosis Control, Demonstration, and Training Centre. Included in this number were 322 doctors and 367 nurses, the rest being laboratory and x-ray technicians, social workers, and related personnel.

As a result of a systematic survey conducted at the Centre, attention was called to the prevalence of tuberculosis among university students. Radiological examination of newly registered university students has been made compulsory. From November 1950 to January 1951 more than 2,000 students were examined at the Centre, and the rate of active tuberculosis was found to be 20 per 1,000.

Announcement has been made of a medico-social training course in tuberculosis which will be given at the Centre from 1 May to 15 June. This course, which is open to any doctor in Turkey, will include five series of lectures covering : (1) the causes and prevention of tuberculosis, (2) the diagnosis of tuberculosis, (3) the treatment of tuberculosis, (4) modern antituberculosis facilities, and (5) the social aspects of tuberculosis and tuberculosis control in the world. In addition to the lectures, technical demonstrations and clinical instruction will be given. Further information may be obtained from Dr. E. Berthet, WHO Tuberculosis Consultant at the Centre.

Austria

An extension of antituberculosis activities, with UNICEF aid, is under consideration in Austria, where mortality from the disease is estimated at 90 per 100,000. In the city

of Vienna, mass x-ray surveys have revealed about 7 suspect cases in every 1,000 examined, and there are 8,000 open cases in the dispensary registers.

An intensive BCG campaign was undertaken in 1948 with the help of the Danish and Swedish Red Cross Societies ; in 1949, with the co-operation of the International Tuberculosis Campaign, the project was expanded. By July 1950, 700,000 children had been examined and 500,000 vaccinated.

The Austrian Government has developed a general programme of tuberculosis control which will include BCG vaccination, establishment and enlargement of central dispensaries in each province, extension of treatment facilities, and a scheme for rehabilitation. UNICEF has been asked to help, or is already helping, along the following lines :

1. Strengthening the laboratories in the provinces and expanding diagnostic facilities in Vienna.

2. Providing laboratory supplies for BCG production.

3. Providing x-ray equipment, in order to facilitate early diagnosis and to make possible the examination of nearly 100,000 children per year.

4. Providing funds for early case-finding and follow-up work in the industrial and semirural area of Styria.

Nursing

WHO nursing staff

WHO's nursing staff now numbers 41, distribution by regions being as follows : South-East Asia, 16 ; Western Pacific, 14 ; Eastern Mediterranean, 7 ; the Americas, 2 (not counting those engaged by PASB alone) ; Headquarters, 2. These nurses represent many nationalities and are serving in WHO projects of many types, their role being that of instructor as well as of assistant in clinical activities.

Republic of the Philippines

Public-health nurses who are already employed in the health services have been the first to receive special training in the rural health demonstration and training project which has been launched in the Philippines.[1] The two-month course, planned with the aid of the Educational Section of the Filipino Nurses' Association, included, in addition to technical demonstrations and practical field experience, lectures on subjects such as public-health administration, public-health nursing, maternal care, child care, school nursing, hygiene and sanitation, nutrition, and vital statistics. Miss W. Visscher is the WHO nurse assisting in this project.

Venereal Diseases and Treponematoses

Ecuador

An experimental project in syphilis-control has been undertaken in Ecuador. The plans call for an 8-month campaign to treat syphilis in a population group of 5,000 to 6,000 persons between the ages of 15 and 50 years, using procaine penicillin in oil and aluminium monostearate (PAM) as the therapeutic agent. The project will also entail a statistical evaluation of the results, the training of local professional and auxiliary personnel, and the determination of costs of a programme of this kind so that it can be compared with orthodox venereal-disease campaigns. The Ministry of Social Welfare,

[1] *Chron. World Hlth Org.* 1950, **4**, 355

Health, and Hygiene is furnishing local personnel, equipment, physical facilities, and supplies ; WHO and the Pan American Sanitary Bureau are providing penicillin, cardiolipin antigen, and the services of a medical officer and a consultant serologist. Dr. C. Rodriguez is the venereologist in charge, and Miss G. Stout, the serologist.

Egypt

Tanta, Egypt, is the headquarters of an anti-venereal-disease project to which WHO is lending assistance. Dr. M. P. V. Tottie, venereal-disease-control officer of the Royal Swedish Medical Board, has been named chief medical adviser. WHO is also supplying the services of a serologist, a public-health nurse, and a health-programme specialist. For each of these team members, the Egyptian Government plans to provide a second, so that there will be an equal number of international and Egyptian personnel. The project is also truly a joint one with regard to provision of supplies, WHO contributing $40,000 worth of penicillin and laboratory equipment and the Egyptian Government equipping a clinic at the Tanta hospital for the use of the demonstration team.

The demonstration project will also serve as a training centre for venereologists from other parts of Egypt and, eventually, from other countries of the Eastern Mediterranean Region. WHO plans to participate in these anti-venereal-disease activities for two years, after which the Egyptian personnel will take over.

Iraq

The UNICEF/WHO project for the control of bejel and syphilis in Iraq, which was initiated in October 1950,[1] is reported to be progressing most satisfactorily. A building to accommodate a laboratory and clinic for the project is nearing completion in Baghdad. A mobile demonstration team, headed by Dr. E. H. Hudson, is winding up the first intensive survey in rural areas. During January and February 1951, about 1,200 patients were examined and blood samples taken and sent to Baghdad for testing. Over 200 infected patients were given penicillin treatment, which, Dr. Hudson believes, will reduce the incidence of bejel almost immediately as the infectiousness of " open cases " is reduced.

Concomitant with field operations are the research activities being carried on by the Baghdad laboratory. Strains of typical syphilis " spirochaetes " have been sent by the laboratory to the Medical School at Johns Hopkins University, Baltimore, Md., USA, for comparison with similar strains from other parts of the world. Strains of bejel, yaws, and other treponematoses will also be sent to Johns Hopkins for comparative studies.

Haiti

It was recently reported that, up to 21 February 1951, 276,923 persons had received penicillin treatment in the campaign against yaws which is part of the United Nations Mission to Haiti.[2] Of this number, 141,825 showed clinical manifestations of the disease. Treatment has been given to inhabitants in 1,015 communities and is expected to reach those in 133 more. There are 19 treatment units working in the Département du Sud and eight control units in the Département de l'Ouest and de l'Artibonite, where mass treatment operations have been completed. At yaws clinics held twice a week in a recently opened dispensary, several hundred patients are under observation ; all infectious cases are followed by complete physical examination and dark-field and serological tests, and non-infectious cases are also given a complete physical examination.

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[1] *Chron. World Hlth Org.* 1950, 4, 354

[2] *Chron. World Hlth Org.* 1950, 4, 87

Symposia published

Publication of the papers and discussions from the international symposia on syphilis which were held, in September and October 1950, in Paris and Helsinki [1] has been announced. The French version has appeared in the October, November, and December (1950) issues of *Prophylaxie antivénérienne*, and the English in a special supplement to *Acta Dermato-Venereologica Scandinavica* (1951, Vol. 31, Supplementum 24).

French Document on WHO

Under date 17 January 1951, La Documentation Française, in its series entitled *Notes et Etudes Documentaires* (No. 1.421) published a 79-page report on WHO—its structure, functions, and activities from 1946 to 1950.

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[1] *Chron. World Hlth Org.* 1951, **5**, 9